

## UBE NYLON 5033B

### Technical Product Information: CAST – PA monolayer film properties

UBE NYLON 5033B is a basic, high viscosity Polyamide 6/6.6 copolymer. The grade is suitable for a wide range of applications. This material has the following features:

- Excellent processability
- Excellent mechanical properties
- Excellent puncture and pin hole resistance
- Deep drawability

Basic Properties <sup>(1)</sup>	Method	Unit	Value
<b>Polymer</b>	-	-	PA6/6.6
<b>Melting Point</b>	ISO 11357	°C	196
<b>Relative Viscosity (96% H<sub>2</sub>SO<sub>4</sub>)</b>	JIS K6810	-	4,05
<b>Density</b>	DIN 53479	g/cm <sup>3</sup>	1,14

Mechanical Properties <sup>(2)</sup>	Method	Unit	Value
<b>Tensile strength at yield</b>	ISO 527-3	MPa	22 - 26
<b>Tensile strength at break</b>		MPa	105 - 125
<b>Tensile elongation at break</b>		%	430 - 450
<b>Tensile modulus</b>		MPa	450 - 550
<b>Tear resistance</b>	ASTM D 1922	N	2,1 - 2,3
<b>Puncture energy</b>	JAS P-1019	mJ	37 - 39
<b>Puncture deformation</b>		mm	10,0 - 11,0
<b>Spencer impact resistance</b>	ASTM D 3420	mJ	850 - 950
<b>Flex crack (23°C, 1000 cycles / 5°C, 100 cycles)</b>	Mil B-131C	Holes/0,04m <sup>2</sup>	< 20 / < 5

Optical Properties <sup>(2)</sup>	Method	Unit	Value
<b>Haze</b>	ASTM D 1003	%	< 0,5
<b>Gloss</b>	ASTM D 523	%	145 - 165

Gas Barrier <sup>(2)</sup>	Method	Unit	Value
<b>Oxygen (T=23°C, RH=0%)</b>	ASTM D 3985	ml/m <sup>2</sup> .day	33 - 35
<b>Water Vapour (T=40°C, RH=90%)</b>	JIS Z-0208	g/m <sup>2</sup> .day	180 - 200

Slip Properties <sup>(2)</sup>	Method	Unit	Value
Coefficient of friction (static)	ASTM D 1894	-	> 1
Coefficient of friction (dynamic)		-	> 1

Regulation	Method	Unit	Value
FDA / EC	-	-	I&D / I&D

I: Approved for indirect food contact D: Approved for direct food contact

(1) Measured on base resin

(2) All tests carried out with a monolayer cast line, Die width = 350 mm (Coat hanger type)

Structure: PA monolayer

Layer thickness distribution: PA = 50 µm

Cooling conditions: Chiller roll temperature = 20 °C

Sample conditioning and testing conditions: T = 23°C, RH =50%

## Processing conditions

	Extruder					Adaptor	Die
	Hopper	Zone 1	Zone 2	Zone 3	Zone 4		
Temperature (°C)	40 - 120	180 - 200	200 - 220	210 - 230	220 - 240	230 - 250	230 - 250

## Drying conditions

UBE NYLON is supplied dry (moisture content < 0,1%) and packed in high barrier films. However, as polyamide is a hygroscopic material, the user should take a special care of the possible moisture absorption once the bag or liner box has been opened. In case of moisture absorption, the material should be dried with dehumidified air at 80°C for more than 4 hours.

## Storage

Well-sealed packages could be stored in cool and dry conditions over long periods of time. Protect the packages from heat and direct sunlight to prevent possible damages.

## Health & environmental data

Please refer to the corresponding **UBE NYLON** grade SDS.

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